National Institute of Environmental Health Sciences

Temperature and cardiovascular deaths in the US elderly: Changes over time

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Abstract:

BACKGROUND: Short-term changes in temperature have been associated with cardiovascular deaths. This study examines changes in this association over time among the US elderly. METHODS: Daily cardiovascular mortality counts from 107 cities in the US National Morbidity and Mortality Air Pollution Study were regressed against daily temperature using the case-crossover method. Estimates were averaged by time and season using a meta-analysis. RESULTS: In summer 1987 the average increase in cardiovascular deaths due to a 10°F increase in temperature was 4.7%. By summer 2000, the risk with higher temperature had disappeared (-0.4%). In contrast, an increase in temperature in fall, winter and spring was associated with a decrease in deaths, and this decrease remained constant over time. CONCLUSIONS: Heat-related cardiovascular deaths in the elderly have declined over time, probably due to increased use of air conditioning, while increased risks with cold-related temperature persist.

Source: http://dx.doi.org/10.1097/01.ede.0000257515.34445.a0

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature, Other Exposure

Temperature: Extreme Cold, Extreme Heat, Fluctuations

Other Exposure: dew point

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Cardiovascular Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): cardiovascular disease mortality

Population of Concern: A focus of content

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified